AMENDMENT

In the Claims:

Please amend claims as follows:

1. (currently amended) A control circuit for controlling a motor assembly having a coil with first and second nodes and having a movable arm, the control circuit comprising:

a drive circuit operable to be coupled to the first and second nodes of the coil, to receive a control signal, a current signal indicating a magnitude of a current flowing through the coil, and a speed signal, to generate a drive signal in response to the control, current, and speed signals to drive the coil with the drive signal during drive periods, and to uncouple the drive signal from the coil during measurement periods that alternate with and are separate from the drive periods; and

a sensor circuit coupled to the drive circuit and having first and second sensor nodes operable to be respectively coupled to the first and second nodes of the coil such that no element is in series with the coil between the first and second sensor nodes, the sensor circuit operable to generate the speed signal having a level that corresponds to the speed of the arm.

2. (currently amended) The control circuit of claim 1 wherein the sensor circuit is operable to generate the speed signal by sensing a back voltage across the coil during a portion of each measurement period when the current signal indicates that substantially zero current is flowing through the coil and by generating the level of the speed signal such that the level corresponds to the sensed back voltage.

3. (original) The control circuit of claim 1 wherein the drive circuit is operable to accelerate the arm to a predetermined speed and to maintain the arm at approximately the predetermined speed for a predetermined time period.

4. (currently amended) A control circuit for controlling a read-write head assembly during a park or unpark operation, the head assembly including a motor assembly having a coil and a movable arm, the head assembly also including a read-write head coupled to the arm, the control circuit comprising:

a drive circuit operable to receive a control signal, a current signal indicating a magnitude of a current flowing through the coil, and a speed signal, to generate a drive signal in response to the control, current, and speed signals, to drive the coil in response to the control and speed signals during drive periods, and to uncouple the drive signal from the coil during measurement periods that alternate with and are separate from the drive periods such that the read-write head moves to or from a ramped parking platform at a speed that is approximately five inches per second for a predetermined time period; and

a sensor circuit coupled to the drive circuit and operable to sense the speed of the read-write head during the measurement periods and to generate the speed signal having a level that corresponds to the sensed speed of the read-write head.

5. (currently amended) The control circuit of claim 4 wherein the drive circuit is operable to generate the drive signal in response to the sum of the control, current, and speed signals.

6. (currently amended) The control circuit of claim 4 wherein the sensor circuit is operable to sense the speed of the read-write head by sensing a back voltage across the coil during a portion of each measurement period when the magnitude of the current signal indicates that approximately zero current is flowing through the coil.

7. (currently amended) The control circuit of claim 4 wherein the sensor circuit is operable to:

sense the speed of the read-write head by sensing a back voltage across the coil; and

generate the speed signal by generating an intermediate signal from the sensed back voltage, sampling the intermediate signal during a portion of each measurement period when the current signal indicates that substantially zero current is flowing through the coil, and generating the level of the speed signal such that the level corresponds to the sampled intermediate signal.

8. (currently amended) A control circuit for controlling a read-write head assembly that includes a motor assembly having a post, an arm having first and second ends and a midsection pivotally mounted to the post, and a coil operable to move the first end of the arm, the read-write head assembly also including a read-write head coupled to the second end of the arm, the control circuit comprising:

a drive circuit having a control input terminal, a feedback input terminal adapted to receive a current signal indicating a magnitude of a current flowing through the coil, and a first output terminal that is operable to be coupled to a first terminal of the coil; and

a speed-sense circuit having first and second input terminals that are operable to be directly coupled to the first terminal and a second terminal of the coil such that no element is in series with the coil between the first and second input terminals, the speed-sense circuit also having an output terminal coupled to the feedback input terminal of the drive circuit, the speed-sense circuit operable to sense a speed of the arm during measurement periods when substantially zero current flows through the coil.

9. (original) The control circuit of claim 8 wherein the control and feedback input terminals are coupled together.

10. (currently amended) The control circuit of claim 8, further comprising a switching circuit coupled between the feedback input terminal and the output terminal of the of the speed-sense circuit, the switching circuit being operable to couple the feedback input to the output terminal responsive to a control signal being active and to isolate the feedback input from the output terminal responsive to the control signal being inactive.

11. (previously presented) The control circuit of claim 8 wherein the drive circuit comprises a second output terminal operable to be coupled to a second terminal of the coil.

12. (currently amended) A disk-drive system, comprising:

a disk having a peripheral edge and a surface;

a platform disposed adjacent to the peripheral edge of the disk and raised with respect to the disk surface;

a coil;

an arm;

a read-write head coupled to the arm; and

a nondithering control circuit coupled to the coil and adapted to receive a current signal indicating a magnitude of a current flowing through the coil, the nondithering control circuit operable to cause the coil to park the read-write head by sensing a speed of the arm during measurement periods when the current signal indicates substantially zero current flows through the coil and, in response to the sensed speed, moving the read-write head from over the disk onto the platform at approximately a constant speed.

13. (original) The disk-drive system of claim 12 wherein the platform has a ramped side that faces the disk.

14. (canceled)

15. (canceled)

16. (previously presented) The disk-drive system of claim 12 wherein the constant speed equals approximately five inches per second.

17. (original) The disk-drive system of claim 12, further comprising:

a post;

the arm having a first end magnetically coupled to the coil, having a second end, and having a midsection pivotally mounted to the post; and

the read-write head coupled to the second end of the arm

18. (original) The disk-drive system of claim 12, further comprising:

a post;

the arm having first and second ends and having a midsection pivotally mounted to the post;

the coil mounted to the first end of the arm; and

the read-write head coupled to the second end of the arm

19. (currently amended) A method, comprising:

accelerating a read-write head to approximately a predetermined speed using a head-motor coil;

sensing a current flowing through the coil;

directly monitoring a back voltage across two nodes of the coil such that no circuit element is in series with the coil between the two nodes during measurement periods when substantially zero current flows through the coil; and

when or after the head attains the predetermined speed, maintaining the speed of the head at approximately the predetermined speed in response to the back voltage.

20. (original) The method of claim 19 wherein the accelerating comprises accelerating the read-write head from a position over a disk toward a parking platform.

21. (original) The method of claim 19 wherein the accelerating comprises accelerating the read-write head from a position on a parking platform toward a disk.

22. (original) The method of claim 19 wherein the maintaining comprises periodically monitoring the speed of the read-write head.

23. (canceled)

24. (previously presented) The method of claim 19 wherein the maintaining comprises maintaining the speed of the head at approximately the predetermined speed approximately until the head is on a parking surface of a parking platform.

25. (original) The method of claim 19 wherein the maintaining comprises maintaining the speed of the head approximately at or below the predetermined speed until the head moves to a position over a disk from a parking surface of a parking platform.

26. (original) The method of claim 19 wherein the maintaining comprises periodically updating a drive signal to the head-motor coil.

27. (currently amended) A method, comprising:

coupling a nondithered drive signal to a coil of a motor assembly to park a read-write head on a ramped platform;

sensing a current flowing through the coil;

uncoupling the drive signal from the coil to allow ~~a~~ the current flowing through the coil to decay to approximately zero;

when the sensed current is approximately zero, sampling a back voltage across the coil ~~while the approximately zero current is flowing through the coil~~;

adjusting the drive signal in response to the sampled back voltage;

coupling the adjusted drive signal to the coil, the adjusted drive signal shifting the back voltage toward or maintaining the back voltage substantially at a predetermined level; and

repeating the sensing, uncoupling, sampling, adjusting, and coupling the adjusted drive signal one or more times.

28. (original) The method of claim 27 wherein the sampling comprises:

determining when the current through the coil approximately equals or is less than a predetermined value; and

waiting a predetermined time after the step of determining before sampling the back voltage.

29. (previously presented) The method of claim 27 wherein:

the sampling comprises,

generating an intermediate signal that corresponds to the back voltage,

sampling the intermediate signal while the approximately zero current is flowing through the coil, and

the adjusting comprises,

generating a sum of the sampled intermediate signal and a control signal, and

generating the drive signal corresponding to the sum.

30. (currently amended) A disk-drive system, comprising:

a disk having a peripheral edge and a surface;

a platform disposed adjacent to the peripheral edge of the disk and raised with respect to the disk surface;

a coil;

an arm;

a read-write head coupled to the arm; and

a nondithering control circuit coupled to the coil and adapted to receive a current signal indicating a magnitude of a current flowing through the coil, the nondithering control circuit operable to cause the coil to unpark the read-write head by sensing a speed of the arm during measurement periods when the current signal indicates substantially zero current flows through the coil and, in response to the sensed speed, moving the read-write head from the platform to a position over the disk at approximately a constant speed.

31. (currently amended) A method, comprising:

coupling a nondithered drive signal to a coil of a motor assembly to park a read-write head on a platform;

sensing a current flowing through the coil;

uncoupling the drive signal from the coil to allow ~~a~~ the current flowing through the coil to decay to approximately zero;

sampling a back voltage across the coil while the approximately zero current is flowing through the coil;

adjusting the drive signal in response to the sampled back voltage;

coupling the adjusted drive signal to the coil, the adjusted drive signal shifting the back voltage toward or maintaining the back voltage substantially at a predetermined level; and

repeating the sensing, uncoupling, sampling, adjusting, and coupling the adjusted drive signal one or more times.

32. (previously presented) The control circuit of claim 1 wherein the drive signal is nondithered.

33. (previously presented) The control circuit of claim 1 wherein the drive signal is operable to move a portion of the moveable arm at a speed of approximately five inches per second.

34. (previously presented) The control circuit of claim 8 wherein the drive circuit is operable to drive the coil with a linear signal.

35. (previously presented) The control circuit of claim 8 wherein the drive circuit is operable to cause the read/write head to move at a speed of approximately five inches per second.

36. (previously presented) The method of claim 19 wherein the predetermined speed is approximately five inches per second.

37. (previously presented) The method of claim 31 wherein the adjusted drive signal shifts the back voltage toward or maintains the back voltage substantially at a predetermined level that corresponds to the read-write head moving toward the ramp at approximately five inches per second.

38. (New) The control circuit of claim 1 wherein the sensor circuit is further operable to apply the speed signal to the drive circuit during a hard park mode of operation and to isolate the speed signal from the sensor circuit during a normal mode of operation.

39. (new) The control circuit of claim 38 wherein the normal mode of operation includes read, write, and soft-park modes of operation.

40. (new) The control circuit of claim 1 wherein the drive circuit is operable to generate the drive signal in response to the sum of the control, current, and speed signals.

41. (new) A control circuit for controlling a motor assembly having a coil with first and second nodes and having a movable arm, the control circuit comprising:

a drive circuit adapted to be coupled to the first and second nodes of the coil and adapted to receive a control signal, a current signal indicating a magnitude of a current flowing through the coil, and a speed signal, the drive circuit being operable in a drive mode to generate a drive signal in response to the control, current, and speed signals during a hard-park submode of operation and to generate the drive signal in response to the control and current signals during a normal submode of operation, and the drive circuit being operable to apply the drive signal to drive the coil during the drive mode and being operable during a measurement mode to isolate the drive signal from the coil; and

a speed sensor circuit coupled to the drive circuit and having first and second sensor nodes adapted to be respectively coupled to the first and second nodes of the

coil, the speed sensor circuit operable to generate the speed signal indicating a speed of the arm.

42. (new) The control circuit of claim 41 wherein the sensor circuit is further operable to apply the speed signal to the drive circuit during the hard-park submode of operation and to isolate the speed signal from the drive circuit during the normal submode of operation.

43. (new) The control circuit of claim 42 wherein the normal mode of operation includes read, write, and soft-park modes of operation.

44. (new) The control circuit of claim 43 wherein the drive circuit is operable to generate the drive signal in response to a sum of the control, current, and speed signals.

45. (new) The control circuit of claim 41 wherein the speed sensor circuit is operable to sample a back voltage across the coil responsive to the current signal indicating a predetermined current is flowing through the coil during the measurement mode of operation, and wherein the speed sensor circuit is further operable to generate the speed signal having a value that is function of the sampled back voltage.